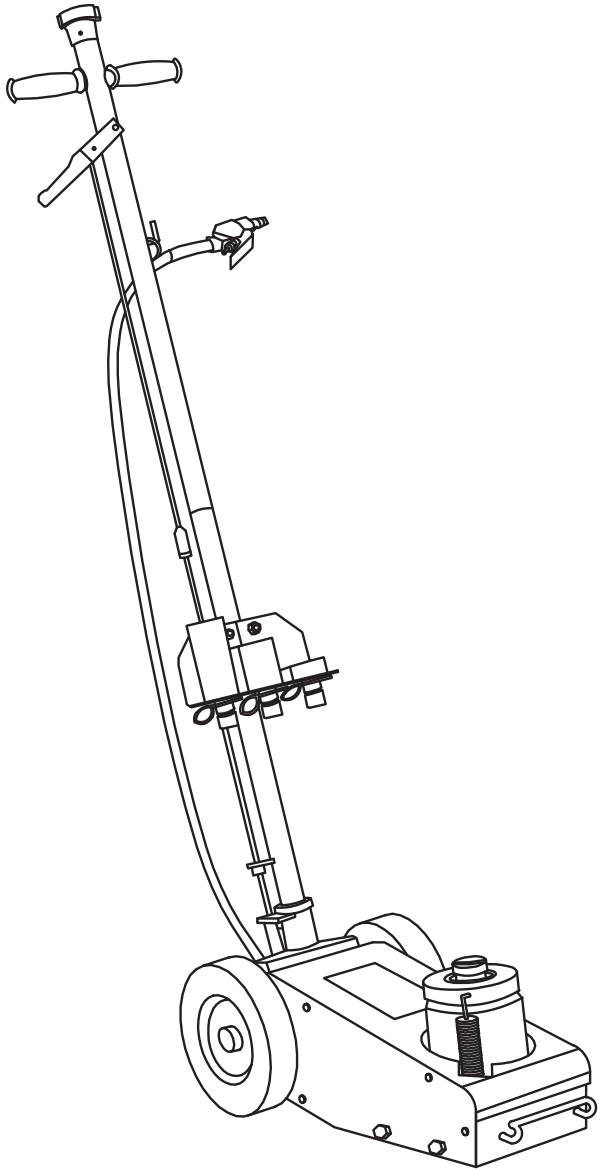
MODEL 820B

AIR HYDRAULIC JACK

20TON CAPACITY

USER'S MANUAL



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FOR YOUR SAFETY

Read all instructions, warnings and cautions carefully. Follow all safety precautions to avoid personal injury or property damage during system operation. Jackco cannot be responsible for damage or injury resulting from unsafe product use, lack of maintenance or incorrect product and/or system operation. Contact Jackco when in doubt as to the safety precautions and operations.

Failure to comply with the following cautions and warnings could cause equipment damage and personal injury.

⚠ WARNING

- Stay clear of loads supported by hydraulics. A cylinder, when used as a load lifting device, should never be used as a load holding device. After the load had been raised or lowered, it must always be blocked mechanically.
- Do not exceed equipment rating never attempt to lift a load weighing more than the capacity of the cylinder. Overloading causes equipment failure and possible personal injury. The cylinders are designed for a maximum pressure of 10,000 psi. Do not connect a jack or cylinder to a pump with a higher pressure rating.
- The system operating pressure must not exceed the pressure rating of the lowest rated component in the system. Install pressure gauges in the system to monitor operating pressure. It is your window to what is happening in the system.
- BE SURE SETUP IS STABLE BEFORE LIFTING LOAD.
  Cylinders should be placed on a flat surface that can support the load. Where applicable, use a cylinder base for added stability. Do not weld or otherwise modify the cylinder to attach a base or other support.
- Avoid situations where loads are not directly centered on the cylinder plunger. Off-center loads produce considerable strain on cylinders and plungers. In addition, the load may slip or fall, causing potentially dangerous results.
- Immediately replace worn or damaged parts genuine JACKCO parts. Standard grade parts will break causing personal injury and property damage. JACKCO parts are designed to fit properly and withstand high loads.

⚠ DANGER

- To avoid personal injury keep hands and feet away from cylinder and work piece during operation.
- NEVER set the relief valve to a higher pressure than the maximum rated pressure of the pump. Higher settings may result in equipment damage and/or personal injury. Do no remove relief valve.

⚠ CAUTION

- Keep hydraulic equipment away from flames and heat. Excessive heat will soften packing and seals, resulting in fluid leaks. Heat also weakens hose materials and packings. For optimum performance do not expose equipment to temperatures of 150°F or higher. Protect hoses and cylinders from weld spatter.
- Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact your equipment dealer / service center. To protect your warranty, use only JACKCO hydraulic oil.

Specifications

Lifting Capacity	Lifting Height		Min Height		Max Height		Shipping Weight		Working Pressure
20 Ton	12.4 inch	315 mm	8.3 inch	210 mm	20.6 inch	525 mm	112.4 Lbs	51 kg	101-145 psi

Inspection

Prior to each use, visually inspect for leaking hydraulic oil, damaged, loose or missing parts. If jack is worn or damaged, remove from service and contact your equipment dealer / service center for repair.

Maintanence

Check oil level. With the jack in an upright position and the ram completely retracted, open the release valve (turn counter-clockwise) and remove the filler plug. The oil level should be just up to the hole. Fill if necessary with clean hydraulic jack oil.

Lubricate internal components. With the release valve open, manually pump the handle several times.

Keep the jack clean. Occasionally lubricate the handle socket pivot point, extension screw, release screw thread, and air valve to prevent corrosion. Noted: The safety valve is not allowed to be adjusted.

Operation

1. Tightly close the release valve knob (located on top of the "T" handle) by turning it clockwise.
2. Center the load on the jack saddle. Connect the air supply, and squeeze the air valve lever to raise the load. Release the air valve lever to stop movement.
3. Transfer the load to support stands.
4. To lower the jack, open the release valve knob by SLOWLY turning it counterclockwise.

NOTE: To adjust the handle, pull up and then release the lever to lock it in one of three positions

Bleeding the Jack

Air bubbles can become trapped inside the hydraulic system, reducing the efficiency of the jack. Purge air from the system as needed by following steps:

1. With the jack sitting on its base and the ram retracted, bleed air by opening the release valve.
2. Pump for 10 seconds.

Pump Prime Instructions

The air/hydraulic pump may lose its prime during shipment or after long periods without use. To prime the pump, follow these steps:

1. Remove the upper cover.
2. Loosen the hex socket bolt one-half turn. (See Figure 1)
3. Close the release valve.
4. Operate the air pump while repeatedly tightening and loosening the bolt.
5. When the piston begins to rise, tighten the bolt. Verify that the piston can rise to the maximum height position.

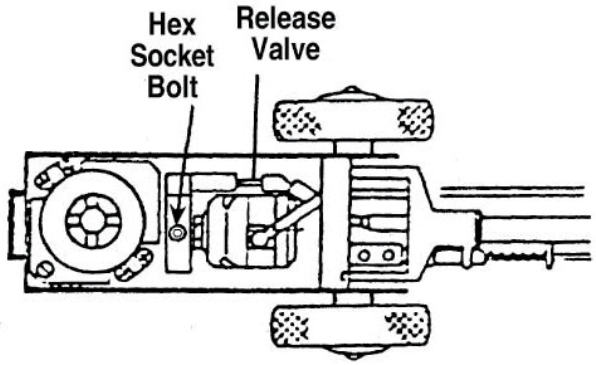
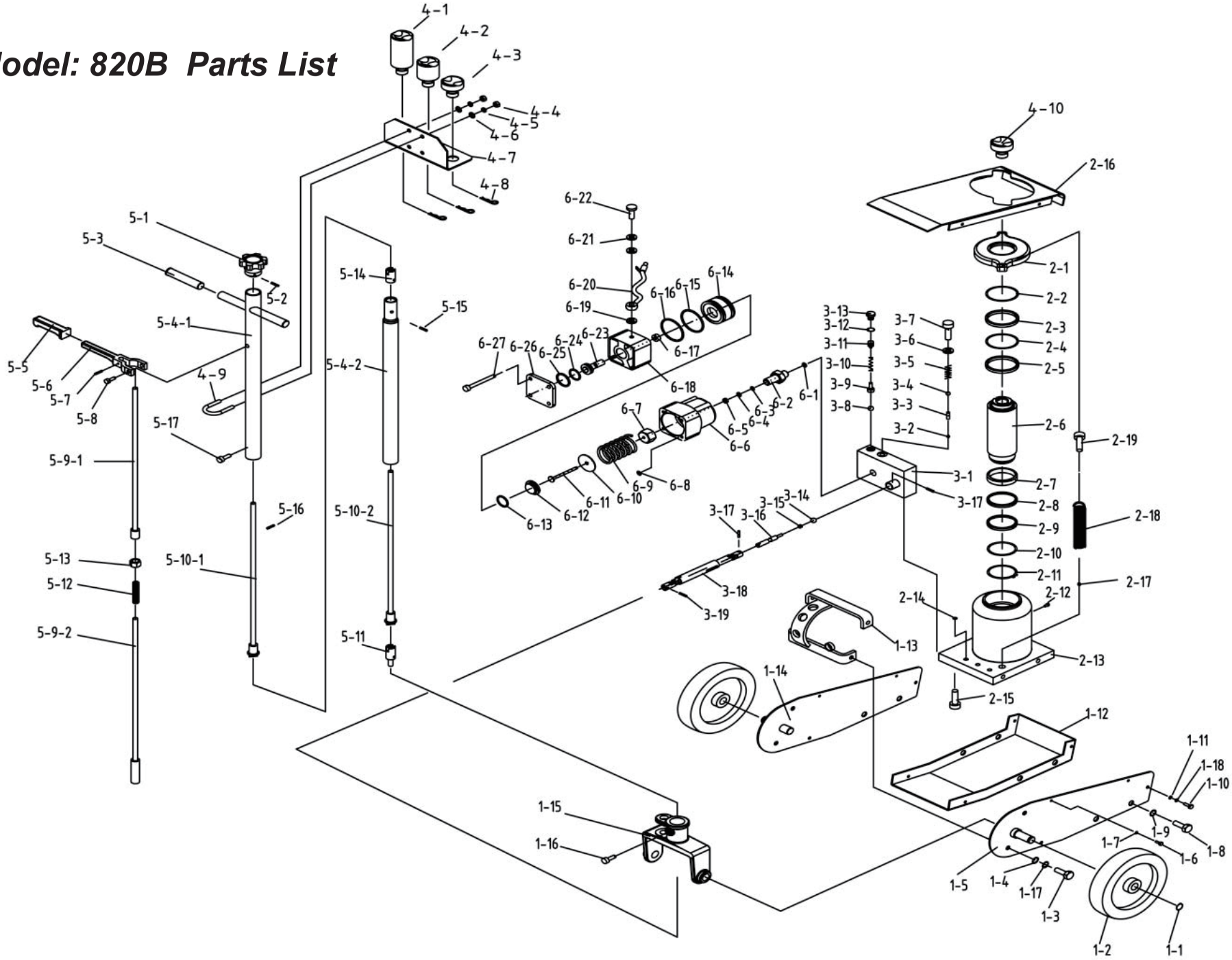


Figure 1

Model: 820B Parts List



Part No.	Description	Q'ty	Part No.	Description	Q'ty	Part No.	Description	Q'ty	Part No.	Description	Q'ty
1-1	Snap Ring	2	2-12	Oil Filler Plug	1	4-3	Adaptor B	1	6-2	Cylinder Pump	1
1-2	Wheel	2	2-13	Cylinder Ass'y	1	4-4	Nut	4	6-3	Y-Sealing Washer	1
1-3	Bolt	4	2-14	O-ring	3	4-5	Washer	4	6-4	Nylon Gasket	1
1-4	Washer	4	2-15	Bolt	3	4-6	Flat Washer	4	6-5	Copper Washer	1
1- 5	Frame Right	1	2-16	Cover Board	1	4-7	Fix Board	1	6-6	Air Cylinder	1
1-6	Bolt	4	2-17	Nut	2	4-8	Pin	3	6-7	Hex Nut	1
1-7	Washer	4	2-18	Spring	2	4-9	U-Bolt	2	6-8	O-ring	1
1-8	Bolt	4	2-19	Bolt	2	4-10	Adaptor A	1	6-9	Spring	1
1-9	Washer	4	3-1	Valve Block	1	5-1	Release Knob	1	6-10	Washer	1
1-10	Bolt	4	3-2	Steel Ball	1	5-2	Pin	1	6-11	Pump Plunger	1
1-11	Washer	4	3-3	Spring	1	5-3	Handle Sleeve	2	6-12	Washer	1
1-12	Bed	1	3-4	Steel Ball	1	5-4-1	Rear Handle	1	6-13	O-ring	1
1-13	Bracket	1	3-5	Spring	1	5-4-2	Front Handle	1	6-14	Piston	1
1-14	Frame Left	1	3-6	Copper Washer	1	5-5	Lock Lever Sleeve	1	6-15	O-ring	1
1-15	Handle Socket	1	3-7	Bolt	1	5-6	Lock Lever	1	6-16	O-ring	1
1-16	Bolt	1	3-8	Steel Ball	1	5-7	Pin	2	6-17	Sealing Washer	1
1-17	Lock Washer	4	3-9	Ball Seat	1	5-8	Bolt	2	6-18	Air Cylinder Base	1
1-18	Lock Washer	4	3-10	Spring	1	5-9-1	Control Rod B	1	6-19	Joint Ring	1
2-1	Spring Hanger	1	3-11	Screw	1	5-9-2	Control Rod A	1	6-20	Air Hose Ass'y	1
2-2	Snap Ring	1	3-12	Sealing Washer	1	5-10-1	Convey Rod B	1	6-21	O-ring	2
2-3	Bushing	1	3-13	Screw	1	5-10-2	Convey Rod A	1	6-22	Bolt	1
2-4	O-ring	1	3-14	Steel Ball	1	5-11	Rod Joint A	1	6-23	Air Rlease Rod	1
2-5	Bushing	1	3-15	Sealing Washer	1	5-12	Spring	1	6-24	O-ring	1
2-6	Piston Rod Ass'y	1	3-16	Release Valve Rod	1	5-13	Nut	1	6-25	O-ring	1
2-7	Piston Ring	1	3-17	Pin	1	5-14	Rod Joint B	1	6-26	Cylinder Cover	1
2-8	Washer	1	3-18	Universal Joint	1	5-15	Pin	2	6-27	Bolt	4
2-9	O-ring	1	3-19	Pin	1	5-16	Pin	1	-		
2-10	Washer	1	4-1	Adaptor D	1	5-17	Bolt	1	-		
2-11	Snap Ring	1	4-2	Adaptor C	1	6-1	Copper Washer	1	-		

Trouble Shooting

Problem	Cause	Solution
Erratic Action	1. Air in system 2. Viscosity of oil too high 3. Ram sticking or binding 4. Internal leakage in ram	1. With jack sitting on its base and ram retracted, bleed air by opening release valve. Pump for 10 seconds. 2. Change to a lower viscosity oil. 3. Look for dirt, gummy deposits, leaks misalignment, worn parts, or defective packing. 4. Replace worn packings. Look for excessive contamination or wear.
Ram does not advance	1. Release valve is open 2. Low / no oil in reservoir 3. Air locked system 4. Load is above capacity of system 5. Pump lost its prime	1. Close release valve located on top of "T" handle. 2. Fill with oil & bleed system. 3. With jack sitting on its base and ram retracted, bleed air by opening release valve, running pump for 10 seconds. 4. Use correct equipment. 5. Follow "Pump Prime Instructions".
Ram only extends partially	1. Low oil level in reservoir 2. Piston rod is binding	1. Fill reservoir with oil, & bleed system. 2. Look for dirt, gummy deposits, leaks, misalignment, worn parts, or defective packing
Ram advances slowly	1. Low air pressure 2. Pump not working correctly 3. Leaking seals	1. Adjust air pressure to 90-145 psi. 2. Rework pump. 3. Replace seals.
Ram advances but doesn't hold pressure	1. Release valve is open 2. Ram seals are leaking 3. Pump c heck valve not working 4. Overload valve leaking or not adjusted	1. Close release valve located on top of "T" handle. 2. Replace seals. 3. Clean / replace check valve. 4 . Replace / adjust overload valve.
Jack leaks oil	1. Worn or damaged seals	1. Replace seals.
Ram will not retract, or retracts slowly	1. Release valve is closed 2. Reservoir too full 3. Ram damaged internally	1. Open release valve. 2. Drain oil to correct level. 3. Take jack to authorized service center for repair.

LIMITED ONE YEAR WARRANTY

Jackco Transnational Inc. warrants all Jackco equipment and tools to the original purchaser against any manufacturing defect in material or workmanship for a period of one (1) year from the original date of purchase. If the defective equipment or tool is determined to be covered under this warranty, it shall be repaired or replaced at manufacturer's discretion without charge, provided that the equipment or tool must be returned with proof of purchase to the dealer and freight prepaid, if returned to the manufacturer. This warranty shall not apply to damage due to accident, negligent use, and lack of maintenance, abuse or applications other than the specific function the equipment or tool is designed for.

No other warranties, expressed or implied, including those of merchantability or fitness for particular purpose shall be applicable to Jackco except as specifically stated herein. In no event shall Jackco be liable to any party for any special, direct, indirect, consequential, punitive damage of any nature caused by the sale or use of the equipment or tool.

Note: This warranty gives the original purchaser specific legal rights which may very from state to state.

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